nia, positive IgM anti dengue, and positive vivax from peripheral blood smear.

Case 2 was a male patient with flu like illness for three day and he just arrived from pantai gading an endemic malaria region, no history of animal contact but there was a pandemic of H1N1 session. At presentation in referral hospital, his laboratory result was pancytopenia. The laboratory result for oropharyngeal swab is positive for H1N1 infection, and his rapid malaria test was positive falciparum.

Case 3 was a male patient with mixed malaria infection with falciparum and vivax . The vivax parasite was detected on pheripheral blood smear one month after finished falciparum treatment. The vivax and falciparum parasite was undetected at first presentation in referral hospital due to kina treatment in local hospital, but the IDT for falciparum was (+) and the peripheral blood was pancytopenia, patient was a traveler in East Borneo and never had malaria before.

Conclusion: A Refferal hospital in Indonesia as one of tropical country could have reffered patients with multiple infection with vary clinical manifestation. One clinical condition could be more prominent than other in one patient, lead to a miss in diagnostic. A careful examination, including taking information of history of travel, epidemiology, and complete laboratory examination could detect the other hidden infection.

http://dx.doi.org/10.1016/j.ijid.2012.05.400

Type: Poster Presentation

Final Abstract Number: 52.005
Session: Travel Medicine & Travel Health
Date: Friday, June 15, 2012
Time: 12:45-14:15
Room: Poster & Exhibition Area

Novel spotted fever group rickettsiosis? in a Japanese traveler returned from India

I. Takajo[1,*], M. Matsuda[1], Y. Kariya[1], S. Sakaguchi[1], T. Kawagichi[1], S. Miyauchi[1], K. Umekita[1], S. Ueno[1], N. Kusumoto[1], Y. Nagatomo[1], Y. Ogasawara[2], S. Ando[2], A. Okayama[1]

[1] *University of Miyazaki, Miyazaki City, Japan*
[2] *National Institute of Infectious Diseases, Tokyo, Japan*

Background: Various spotted fever group rickettsioses distribute worldwide, and cause human acute febrile illness. Rickettsioses are important as traveler's infectious diseases. We experienced a rickettsiosis of Japanese returned from India.

Methods: (Case presentation)A 66 years-old female traveled to south part of India for a week. Next day returned, she complained general malaise and anorexia. On day 7 after onset, she developed a fever and showed skin rash, and saw a local doctor. Splenoma was recognized by the abdominal echo examination. At that time, laboratory data showed thrombocytopenia (9.1 x 1010/L), liver dysfunction (AST 92 IU/L, ALT 97 IU/L), and elevation of C-reactive protein (20.6 mg/dL). She admitted to our hospital from a local doctor.

Results: Fever and laboratory abnormalities improved by the treatment with levofloxacin and ceftriaxone. However, the skin petechial rash and edema of both legs continued. Malaria, typhoid fever, dengue and chikungunya fever were negative by specific tests. On the other hand, IgG antibodies to Rickettsia conorii Malish 7 and Rickettsia japonica YH elevated with paired sera stored whole blood of acute phase, PCR was performed for several rickettsial genes. Only ompA-targeted PCR showed positive. Its sequence was identical with Rickettsia sp. CMCMICRO, of which ompA sequences were partially registered in 2010.

Conclusion: A novel rickettsiosis was diagnosed in a Japanese traveler patient returned from India. This rickettsiosis showed mild clinical course without specific antibiotic treatment, although some symptoms remained. Even now, it is possible that unknown rickettsioses distribute worldwide. The information of this detectedRickettsiasp. is limited. Therefore, it is need to isolate from patients for additional analysis.

http://dx.doi.org/10.1016/j.ijid.2012.05.401

Type: Poster Presentation

Final Abstract Number: 53.001
Session: Epidemiology & Public Health
Date: Saturday, June 16, 2012
Time: 12:45-14:15
Room: Poster & Exhibition Area

Epidemiology of malaria-intestinal helminth co-infection among children and adults in Ona-ara local government area, Oyo state

C. Afonne[1,*], I. Ajayi[1], H. Dada-adegbola[2], F. Oshiname[3], C. Falade[3]

[1] *UNIVERSITY OF IBADAN, NIGERIA, Ibadan, OY, Nigeria*
[2] *University college hospital, ibadan, Ibadan, OY, Nigeria*
[3] *UNIVERSITY OF IBADAN, NIGERIA, Ibadan, OY, Nigeria*

Background: Co-infection of malaria-causing parasites with intestinal helminths is a public health concern and has not been fully explored in Nigeria.

Methods: A cross-sectional survey was conducted among 641 consenting household heads, questions were based on demographics, household environment/hygiene, malaria/helminthiasis prevention practices. Single stool and/or finger prick blood samples were collected from 341 children (6 months-13 years) and 678 adults (≥14 years). Kato-Katz and formol-ether techniques were carried out on stool samples before microscopy; Giemsa-stained thick blood smears were used to screen for malaria parasites. Subsequently, 211 consenting asymptomatic individuals with patent malaria parasitaemia, irrespective of the presence or absence of intestinal helminth, were followed until they developed acute malaria or follow up period elapsed (6 weeks). Data were analyzed using descriptive statistics, Chi-square, Logistic regression, Kaplan-Meier and Log-rank statistic.

Results: Mean age of household heads was 46.0 ± 1.3 years, 9% used mosquito nets, 50% managed malaria at home first before visiting other health care providers. Many (55.7%) used drugs to prevent worm infection; (21.0%) used herbs while 23.3% did not practice deworming. The mean age of children and adults tested were 5.9 ± 0.68 and 45.1 ± 2.5 respectively.Prevalence of asymptomatic malaria, intestinal helminth infections and malaria-intestinal helminth co-infection were 26.7%, 22.1%, and 13.9% respectively. *Ascaris lumbricoides* (94.0%), *Strongyloides stercoralis* (2.0%), *Hookworm* (2.0%), *Trichuris trichuria* (1.0%) and *Enterobius vermicularis* (1.0%) were identified. Children were more likely to be co-infected than adults (OR = 2.7; CI = 1.1 - 6.6). Children whose head of household had no education were more likely to be co-infected than those whose head of household had were educated

(OR = 3.2, 95% CI = 0.13 - 0.75). Among those followed up, 41.7% developed acute malaria. Respondents with only malaria parasites were more likely to develop symptoms of acute malaria than those co-infected; however this was not significant (OR = 2.12, CI = 0.99 - 4.58).

Conclusion: Age was a significant predictor for co-infection; however, modifiable risk practices which have potential for promoting malaria-intestinal helminth co-infection existed in the study area. Integration of malaria and intestinal helminth control programs is advocated, especially among children.

http://dx.doi.org/10.1016/j.ijid.2012.05.402

Type: Poster Presentation

Final Abstract Number: 53.002
Session: Epidemiology & Public Health
Date: Saturday, June 16, 2012
Time: 12:45-14:15
Room: Poster & Exhibition Area

Detection of hazardous organisms in raw and pasteurized milk with particular reference to Enterobacteriaceae

M.-U.-D. Ahmad*, A. Ayesha, A. Ahmad Anjum, M. Ayaz, M. Mushtaq

University of Veterianary and Animal Sciences, Lahore, Pakistan, Lahore, Pakistan

Background: In Pakistan, approximately 80% of milk is produced in rural areas and is marketed through a complex marketing chain consisting of multiple layers of intermediaries. Milk adulteration is a serious concern in peri-urban milk supply chain. The present study was carried out to detect the hazardous organisms in raw milk from public health point of view.

Methods: Milk samples were collected from milk retail shops in and around Lahore. Their microbiological quality was studied by performing standard plate count (SPC), coliform count and identification of hazardous bacteria belonging to the family Enterobacteriaceae. The micro flora of milk was also studied for the prevalence of multiple drug resistant (MDR) bacteria.

Results: Standard plate count of raw milk ranged from 4.2x106 to 7.7xl07 c.f.u/ml. The coliform counts ranged from 3.4x 104 c.f.u/ml to 6.9x105/ml. A total of 81 isolates were identified from raw milk samples. These included *Yersinia* (3 strains*), Klebsiella* (16 strains), *Escherichia coli* (14 strains), *Enterobacter* (11 strains), *Shigella* (3 strains), *Salmonella* (19 strains) and' *Proteus* (15 strains).The standard plate count for pasteurized milk ranged from 1.45x104 c.f.u/ml to 3.8x 105 c.f.u/ml. All samples were outside the international standard for coliform bacteria. A total of 13 isolates were identified from pasteurized milk samples. These included *Yersinia* (2 strains*), Klebsiella* (1 strains), *Escherichia coli* (6 strains), *Enterobacter* (2 strains), *Shigella* (1 strains) and *Proteus* (1 strains).

All the isolates showed multiple drug resistance to various commonly used antibiotics in veterinary practices. *Escherichia coli* were resistant to all antibiotics used, except Gentamicin (10μg). *Enterobacter* was resistant to Ampicillin (10μg), *Shigella* was resistant to Ampicillin (10μg), Oxytetracycline (25μg), Streptomycin (10μg), Pencillin (10μg) and Tribrissin (25μg). *Salmonella* was resistant to Ampicillin (10μg), Oxytetracycline (25μg), Streptomycin (10μg), Pencillin (10μg) and Tribrissin (25μg). All the isolates showed resistance to Penicillin (10μg). Most of the isolates were sensitive to Gentamycin, Kanamycin and Chloramphenicol.

Conclusion: Results of the study recommended on-site pasteurization and implementation of HACCP following established standards to facilitate the production of raw milk of high quality and safety.

http://dx.doi.org/10.1016/j.ijid.2012.05.403

Type: Poster Presentation

Final Abstract Number: 53.003
Session: Epidemiology & Public Health
Date: Saturday, June 16, 2012
Time: 12:45-14:15
Room: Poster & Exhibition Area

Health concern and chronic poisoning of heavy metals for drinking water consumers in rural regions in the west area of Iran

M. Alasvand*, A.H. Barati, A. Maleki

Kurdistan University of Medical Sciences, Sanandaj, Iran, Islamic Republic of

Background: Water pollution due to toxic heavy metals has been a major cause of concern. For these reason the aim of this study was to evaluate contamination of trace element in drinking water and the health status of inhabitants with respect to multi-chronic arsenical poisoning.

Methods: Concentrations of 8 heavy metals (As, Se, Hg, Cd, Ag, Mn, Cr and Pb) were measured in drinking water sources from 530 villages in Kurdistan Province in the west of Iran by graphite furnace or flame atomic absorption spectroscopy method.

Results: The results showed that the level of As, Cd and Se in 28 village drinking water sources exceeded WHO or National Standard Limits. The levels of concentration of arsenic in drinking water ranged from 42 to 1500 μg/L. Then in a cross-sectional survey, 587 people from 211 households were chosen for clinical examinations of multi-chronic arsenical poisoning including pigment disorders, keratosis of palms and soles, Mee's line in fingers and nails and the gangrene as a systemic manifestation. Of 587 participants, 180 (30.7%) participants were affected by representing the type of chronic arsenical poisoning. The prevalence of Mee's line, keratosis, and pigment disorders were 86.1%, 77.2% and 67.8% respectively.

Therefore, the prevalence of Mee's line between inhabitants was higher than the other disorders. The results show a strong linear relationship between arsenic exposure and occurrence of multi-chronic arsenical poisoning ($R2 = 0.76$). The association between age for more than 40 years and gender for more than 60 years with chronic arsenical poisoning is significant ($p<0.05$). Also, there is a relationship between subjects who were affected with disorders and duration of living in the village. Except for gangrene disorder, the odds ratio of prevalence of other disorders with arsenic exposure level in drinking water show a highly significant relationship between arsenic content and the risk of chronic disorders ($p<0.01$).

Conclusion: These results confirm the need to further study trace elements in drinking waters, food products and other samples in this area and the relationship to other chronic diseases arising out of arsenicosis.

http://dx.doi.org/10.1016/j.ijid.2012.05.404